ASSEMBLY AND MAINTENANCE MANUAL

CRUISE CARBON

CONTENT

Safe flying rules 3
Manual 4
Important notices 4
Amendments to the manual 4
Dimensions 5
Landing gear (type, parameters) 6
Operating limitations 6

Normal procedures
Pre-flight preparation 7
Trike assembly 7
Installation of the paramotor 8
Line holders 10
Frame string installation 11
Pre-flight check 12
Takeoff 13
Landing 13
Periodical maintenance 13

Transportation rules 14
Packing 14

Long time storage rules 15

Certification 16

Trike Components 18

Records
Service log 28
Record of bulletin implementations or mandatory changes 30

Notes 31

Equipment 33
Optional equipment 33

Warranty 34

Safe flying rules

- Observe UL aircraft regulations.
- Do not overestimate your pilot skills and never show off. Use open areas for emergency landing training.
- Watch the weather forecast carefully. Do not plan long flights, when storms, fogs or frost are forecasted.
- Watch fuel level (flight time and real consumption).
- When Choosing the direction and height of your flight always consider_possibility of emergency landing.
- Always fly with reserve of speed, particularly during all start and landing manoeuvres.
- Do not make any kind of aerobatics (e.g. total wingovers), even if you think, your skills and flight characteristics of your MPG can manage it.
- Do not underestimate the navigation and flight planning. Do not fly into a unknown area without proper preparation and equipment (map, compass).
- Fly only in good physical and mental condition.

MANUAL

1) This manual is written by the manufacturer of the MPG.
2) All records must be readable, permanent and none of the pages must be pulled out.
3) This filled-in book is a part of technical documentation.
4) Total flight time, number of starts and latest issued mandatory bulletins must be transferred to the new book.
5) Record only measured or certified data to the technical-operating records. (After approval of commissioned inspector–technician)
6) The owner guarantees the accuracy of the operation records.

IMPORTANT NOTES

AMENDMENTS TO THE MANUAL

If there is change of flight rules or a required change to the construction of trike, announcements of these changes will be published in bulletins (e.g. in Pilot magazine). Each owner of trike must take an appropriate action and implement this change and make record of this in the relevant part of this handbook.

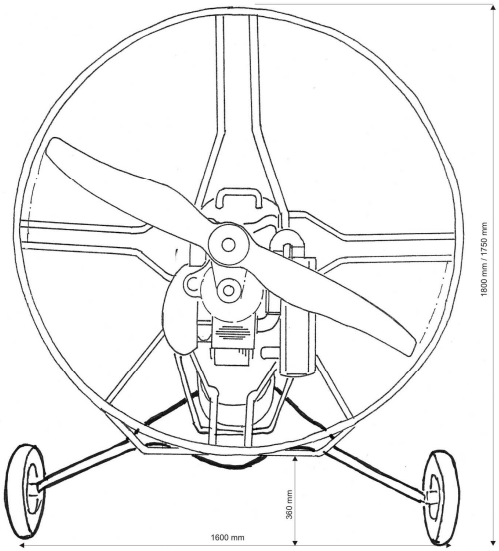
Every owner, user and pilot of this MPG must thoroughly familiarize themselves with this manual.

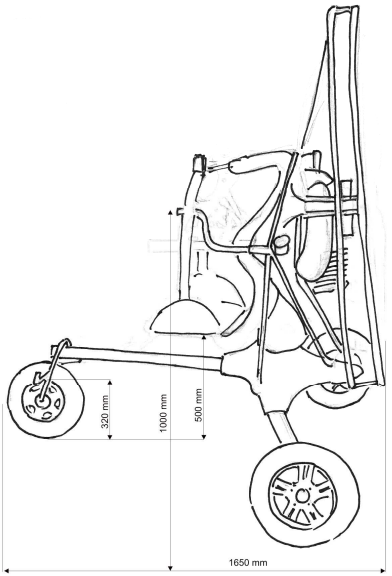
THIS PRODUCT DOES NOT COME UNDER CERTIFICATION OF CIVIL AVIATION AUTHORITY CR AND IT IS OPARATED ON USERS OWN RISK.
ALL INTENTIONAL SPIRALS, FALLS AND AEROBATICS ARE PROHIBITED.

All construction changes to the trike altering the original certified setup must be authorised by commissioned inspector-technician, who registered this trike.

Any damage to the trike must be notified to manufacturer of relevant inspector-technician, who recommends service, supervises the repair and makes technical check of the trike afterwards. He will make a record of this in the documentation of the trike.

DIMENSIONS





Landing gear (type, parameters)

type	CRUISE CARBON
body	laminated
colour	orange
back axles	Carbon sandwich
central axle tube	Aluminium, Carbon
frame	stainless steel
wheels	Aluminium, spoke
joints	quickjoints with locks
Maximum load	175 kg

All landing gear undergoes control tests before release. All connecting elements are checked with appropriate care. All screws, nuts, rivets etc. are thoroughly tightened and secured with Loctite.

OPERATING LIMITATIONS

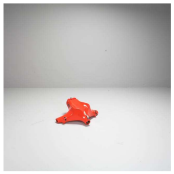
The landing gear can be mounted on the Nirvana brand paramotors, the MadMax, Rodeo, Electric, Colibri and Easy models.

Flight types

Only daytime VFR flights are allowed
(Visual reference flight). Other flight types are prohibited.

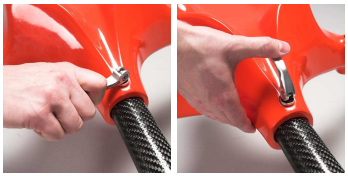
PRE-FLIGHT PREPARATION

Trike assembly



Základní částí je skelet
basic skeleton

Zasuneme přední nápravu do skeletu
insert the front axle into skeleton



Zašroubujeme a zajistíme ve skeletu upínákem
insert and secure the fixing screaw

Nasuneme pravou a levou zadní nápravu
insert right and left rear axles

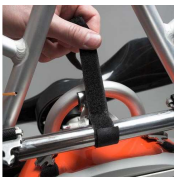
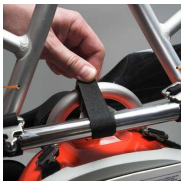
Vytáhneme zajišťovací kolíky ze skeletu dva přední ajeden zadní
take out two rear and one front secure pins front he skeleton

Vsuneme rám
insert the frame

zajistíme pomocí zajišťovacích kolíků dva vpředu jeden vzadu
secure the frame with secure pins – two in the front and one in the back

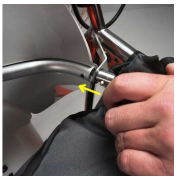
Installation of the paramotor

1. Insert the paramotor into trike frame from behind.

2. Fix the velcro strap around the paramotor holder and the trike frame.

3. Fix the paramotor frame to the trike frame by Velcro (on left and right side).



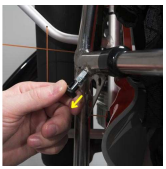
4. Insert and lock the main harness connectors to the paramotor; they must go through the lower trike holder.

5. Check all fixation points.

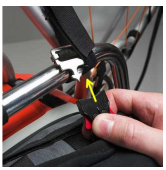
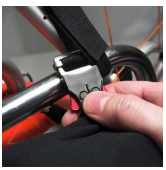
6. Harness strut stirrup put on the trike hinge eye on the harness (both, left and right side).

7. Put on the trike harness strut and secure (both, left and right side).

8. Put on the trike harness strut and secure (both, left and right side).



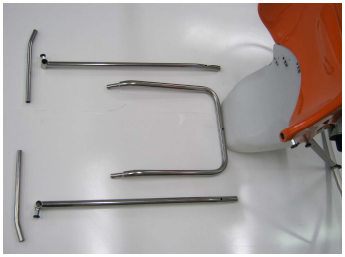
9. Safety pin(both, left and right side).

10. Fix the upper harness hanging points to trike frame.

11. Now is your trike ready to fly!

Assembly of the frame for the trike Cruise Carbon Instinct

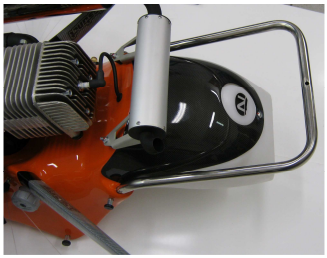


1. Frame components

2. Instead of original harness hinges put on horizontal struts of the frame for CCI

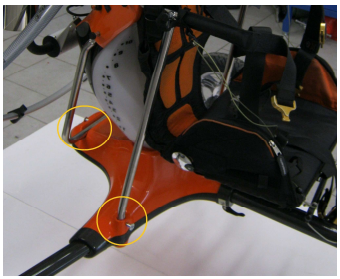
3. Slide in new horizontal struts into vertical struts and fix it by locking pins

4. Disassemble frame bottom struts from the paramotor



5. Insert frame arch for CCI into the shell and fix it by locking pins

6. Then reassemble bottom frame arche of the paramotor

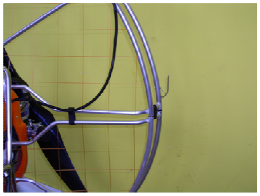
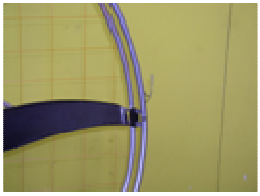


7. Place paramotor with harness and all assembled parts of the CCI frame into the trike shell

8. Fix the frame in the shell by front and back safety pins of Cruise Carbon Trike.

Line holders

The line holder is installed on the back arch (in the flight direction) of the protective paramotor frame. The purpose is to protect the lines from damage by propeller, and the frame itself from the pressure in the lines running around the frame during take off.

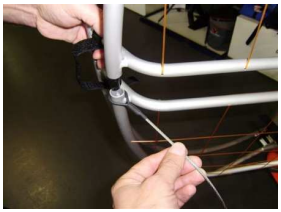
Installation:

Frame string installation

1.

Povolíme velcro pásku a nasadíme lanko do rámu/ *Loose the velcro and thread the string*.

2.



Rám opět složíme a zatáhneme pásku/ *Fix the frame back and tight velcro*.

3.

Napneme dle potřeby okolo rámu tříkolky/ *Tight around the trike frame.*

4.

Řádně přitáhneme svorku/ *Tight the clamp properly*

5.

Stejně tak i na druhé straně/ *Do the same symmetrically on the other side.*

6.

7.

8.

9.

10.

A-Assist for trike Cruise Carbon

1. Take off plugs

2. Take off springs

3. Put the tube of A-Asist

4. Put the plastic locking plug by pin into the slot

5. Connect to carbine of A-Asist with mailon of glider lines „A“

6. The orange line of A-Asist can´t be tight, when the glider is in possition vertically into the harness

7. Setting of length of line - move the stringy knot on the starting line according pension of A-Asist

8. Both lines must have same length (size)

PRE-FLIGHT CHECK

frame	intact, assembly, securing
body	integrity
axles	intact, correct insertion, securing
secure	front landing gear pipe – screw with snap clamp frame in skeleton, 2x front and 1x rare pin paramotor upper handrail –Velcro belt – paramotor frame frame belts seat into back paramotor pipe seat spacer for trike frame upper seat anchor
wheels	correct tyre inflation 2.5 MPa

TAKEOFF

Make front start in front wind. Use the line holders for easy takeoff without emergency of damaging the frame or propeller. Check the canopy filling and line condition. Apply full gas and start the trike without breaking the paraglider. Keep the direction against the wind. Do not brake after takeoff and climb with full speed. This minimises the danger of speed loss.

LANDING

Carefully check the landing place, possible barriers and wind direction. Do always land against the wind.
Press and hold the engine switch off button on the throttle till the engine stops in high min 15 m above the ground. Land on wheels and put the canopy on the ground to avoid the contact with hot engine parts.

ENGINE TUNING AND MAINTENANCE

tyres - Check the tyre pressure regularly. If required, inflate up to 2.5 Mpa.
brake - We recommend replacing the brake-shoe lining as soon as the brakes become less effective.

The Cruise Carbon landing gear requires a regular pre-flight check and an annual check by the manufacturer or technician authorized to extend the validation of the technical capability (SLZ)

In the event of any damage to the (SLZ) part, the repair or replacement must be carried prior to the next flight.

TRANSPORTATION RULES

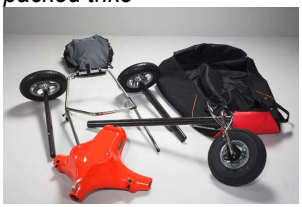
Assembled trike

- Engine must stand on the tank and frame together. It must not be supported by frame only
- Fix tightly by shell or engine part (It must not be fixed by the frame!)
- Secure properly from emergency of fall or damage

Unpacked

PACKING

packed trike



skelet vložíme do obalu skeletu a zavřeme na velcro

insert skeleton into its covering and close the velcro

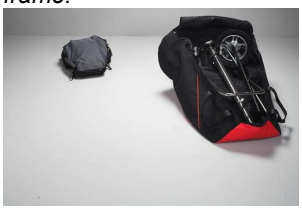
skelet uložen

packed skeleton

vložíme skelet v obalu do tašky na cruise
insert packed skeleton into trike bag

uložíme přední nápravu kolem do výřezu v tašce a zajistíme suchým zipem

vložíme zadní nápravy- kola za řídítka přední nápravy a zajistíme je suchým zipem obalu skeletu společně s rámem
insert rear axles (the wheels behind the front axle handlebar) and secure with skeleton covering velcro togehter with the frame.



nahoru uložíme složenou sedačku
on the top place fold up harness

fit front axle wheel into cutout in the trike bag and secure with velcro

uložíme rám zadním obloukem dopředu, pomocí rychlospojek jej připneme k řídítkům přední nápravy
place the frame the rear-bend to the front and secure with joins to the front axle handlebar

packed trike

LONG TIME STORAGE RULES

- store the paramotor in dry, clean place in constant temperature

Letecká amatérská asociace ČR – Light Aircraft Association of the Czech Republic

Approval for production, repairs, testing and import of sport flying equipment and its parts

Issued by Light Aircraft Association of the Czech Republic (LAA CR hereinafter) on the basis of the authorisation by the Ministry of Transport according to Act No.49/1997 Coll., on civil aviation and on amendment and suplement of act No. 455/1991 Coll., on engaging in trade (The Trades Licensing Act), as subsequently amended.

Registration number:

05/2005

Approval holder:

Nirvana Systems s.r.o.

Adress: **Jateční 523, 760 01 Zlín Prštné**
IČ: **26978555**

Responsible person:

Ing. Pavel Březina

Adress: **Příkrá 3538, 760 01 Zlín**
Date of birth: **660227/1368**

Scope of Approval:

Vývoj, výroba, opravy SLZ: padákové kluzáky, motorové padákové kluzáky, postroje, záchranné systémy, ochranné prostředky pro paragliding a motorový paragliding

Expert supervisit is assigned to:

LAA ČR Chief Technical inspector PL and MPL

The approval holder is obliged to proceed according to the appropriate stipulations of the LA-1 regulation and of the pertinent stipulations of other regulations.

Issued: **11/11/2009**
Validity until: **11/11/2012**

TECHNICKÁ INSPEKCE LAA ČR č. 1 MPL

Ing. Miroslav Huml
LAA ČR Chief Technical inspector PL and MPL

CZECH REPUBLIC

Letecká amatérská asociace ČR – Light Aircraft Association of Czech Republic

Typový průkaz – Type Certificate

Vydává Letecká amatérská asociace české republiky (dále jen LAA ČR) v souladu s ustanovením §81 odst. 2. zákona o civilním letectví č. 49 / 1997 Sb. a v souladu s prováděcími předpisy.

Označení typu letecké techniky:
Designation of the type of aviation technology:

POSTROJ PRO MOTOROVÉ PADÁKOVÉ KLUZÁKY

Model: LEXX R

Držitel typového průkazu:
Owner of Type Certificate:

Ing. Pavel Březina
Nirvana paragliding
Příkrá 3538
760 01 Zlín

Schváleno technickou komisí LAA ČR dne:
Approval of the Technical commission of LAA CR:

17. 3. 2004

Typový průkaz je zaregistrován u LAA ČR pod značkou:
Type certificate is registered in LAA CR under registration sign:

PL 5 – 02 / 2004

Typový průkaz vydán 19. 3. 2004

Hlavní inspektor technik MPK LAA ČR:

Ing. Miroslav Huml

Letecká amatérská asociace ČR
Ke Kablu 289
102 00 Praha 10
Tel.: +420 271 085 274

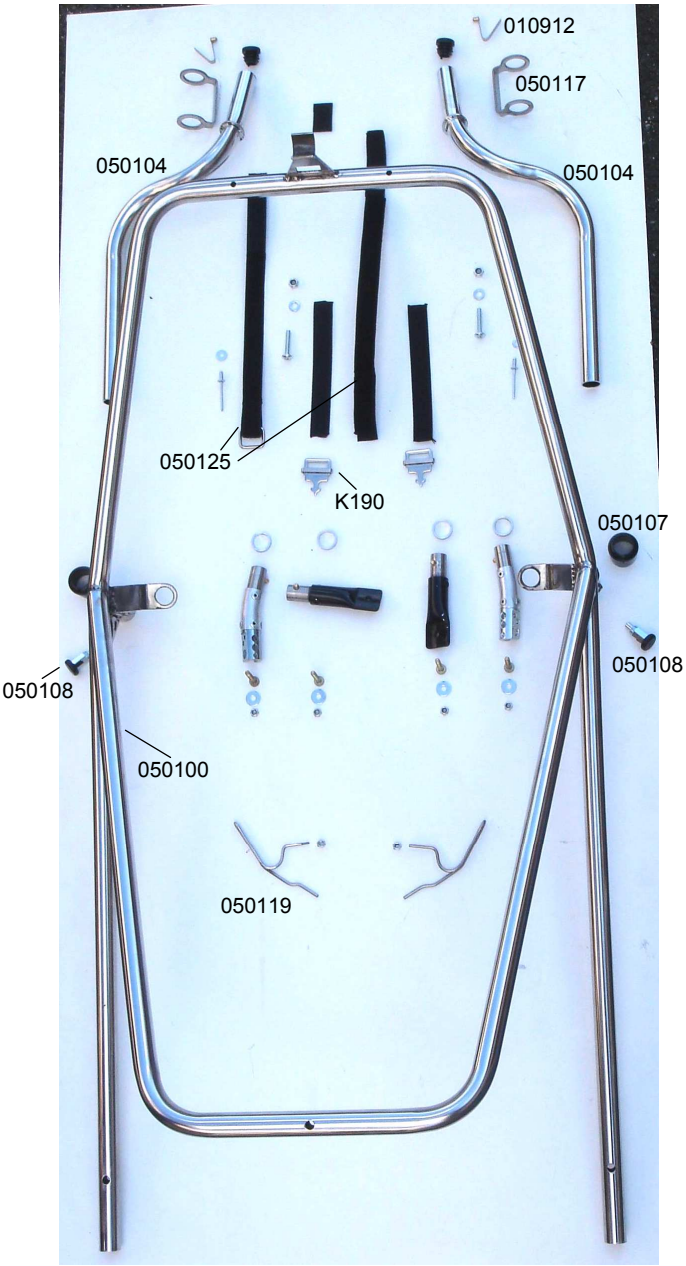
Ředitel správy SLZ LAA ČR:

Jiří Koubík

REMOVABLE LANDING GEAR
NIRVANA TRIKE
CRUISE CARBON

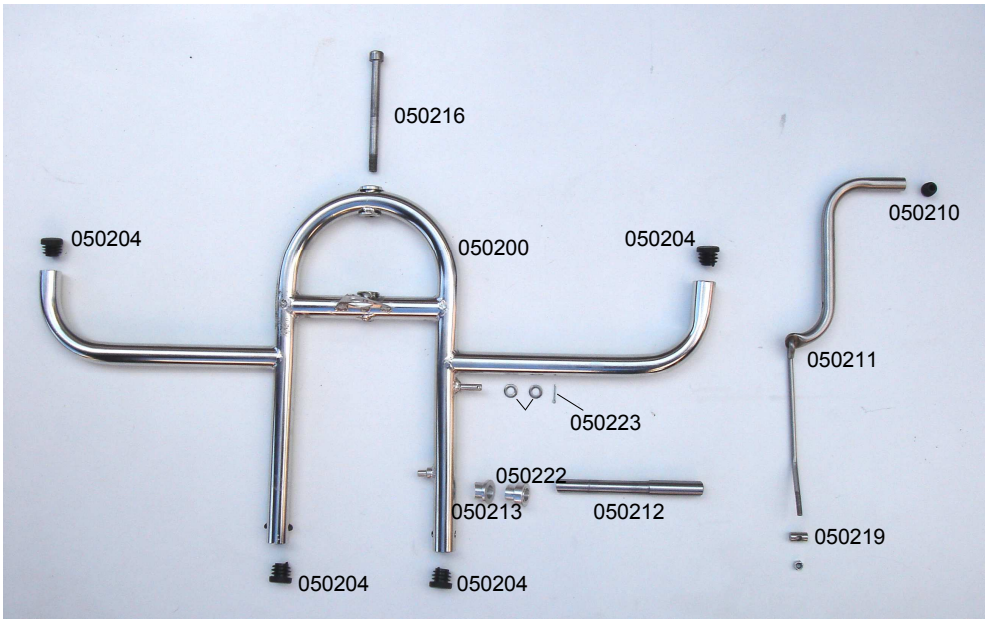
COMPONENTS

Frame **05 01 00**



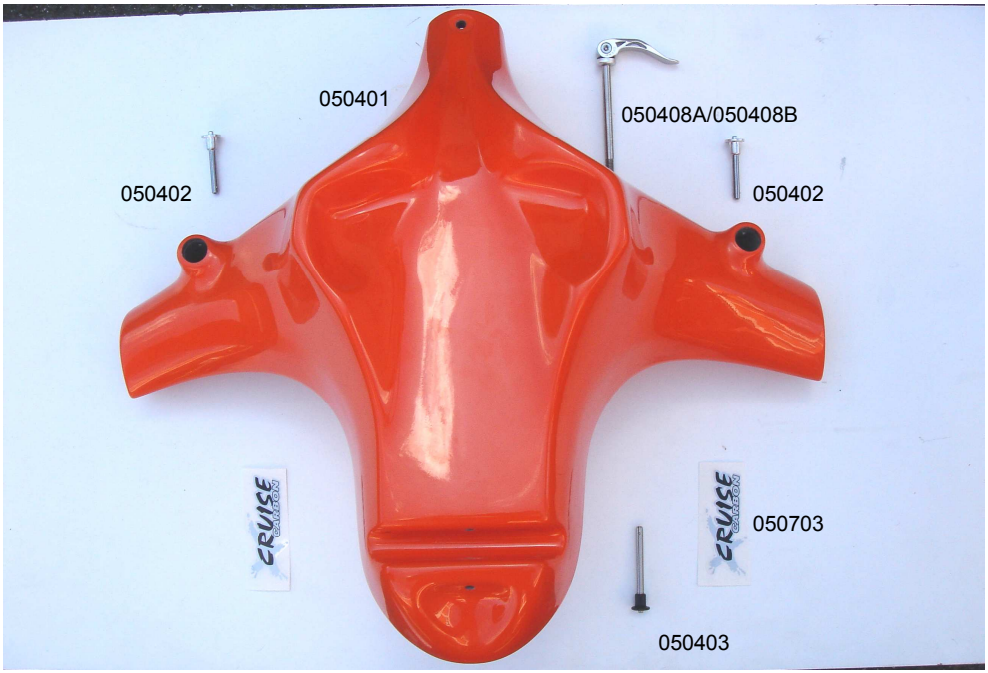
Frame Instinct **05 09 01**

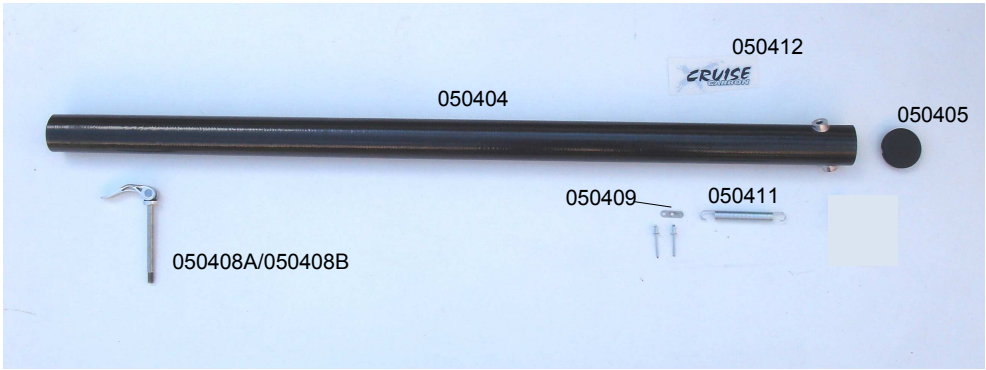
Front fork **05 02 00**



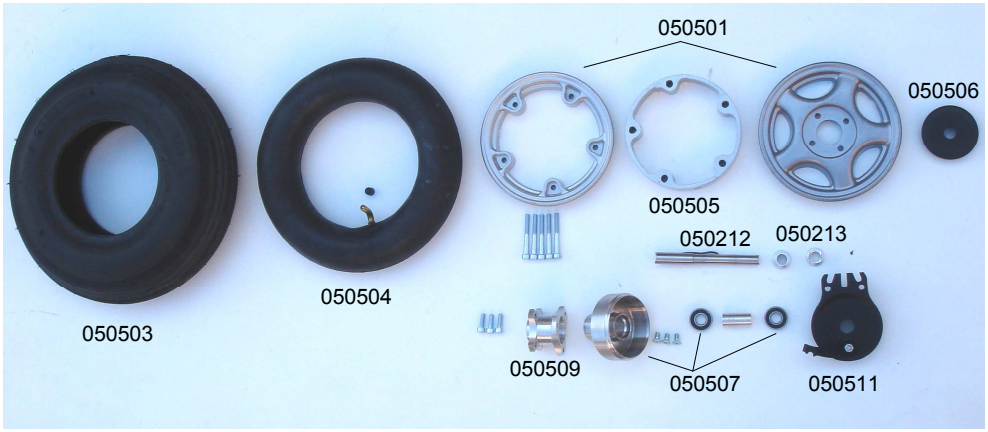
Back axles 05 03 xx

Shell Cruise Carbon and front axle 05 04 xx

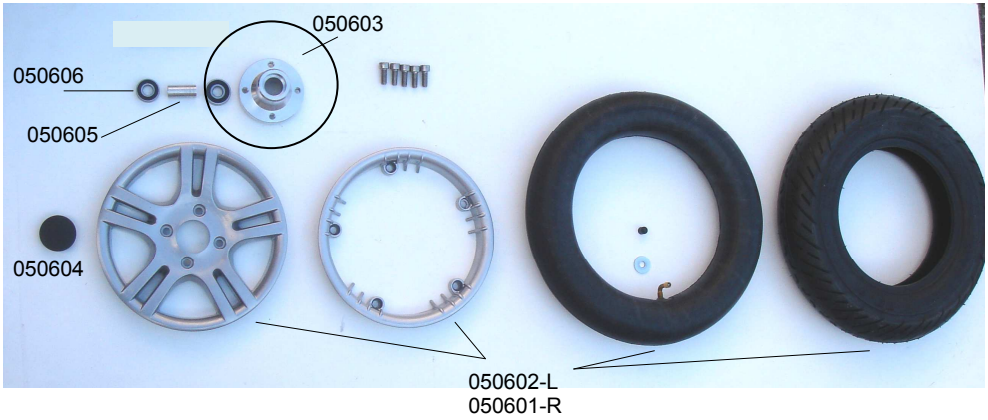




Front wheel 05 05 00

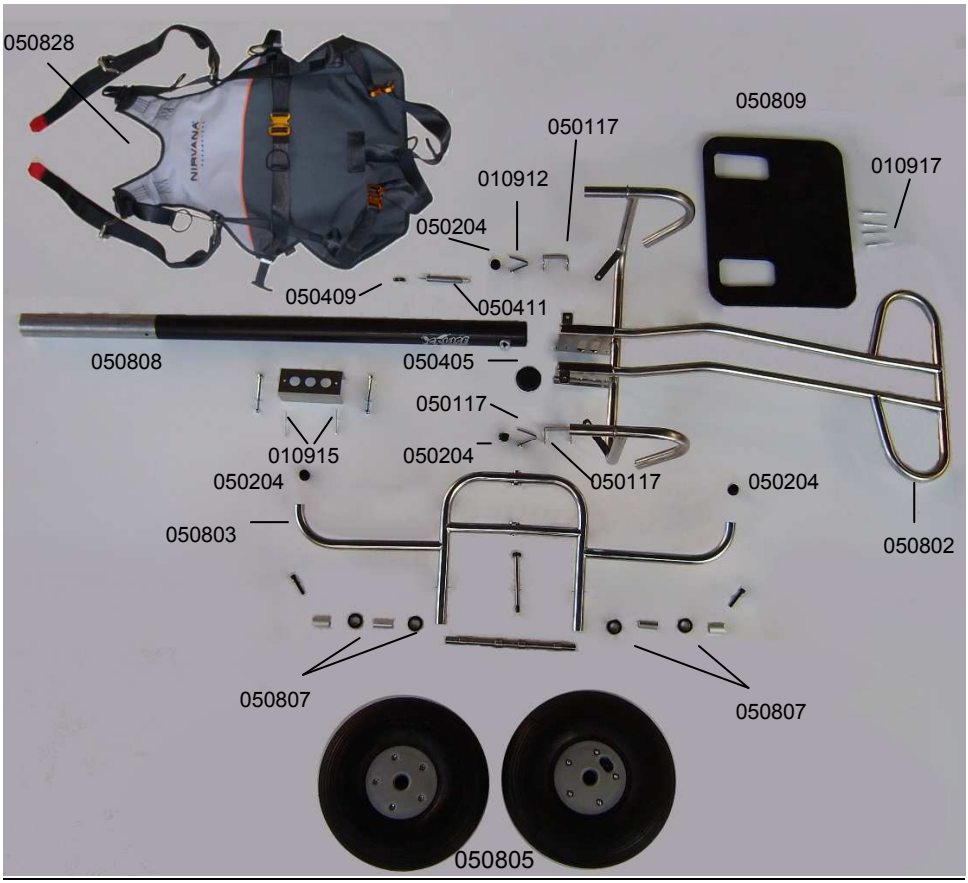


Back wheels 05 06 00



Transport bag **05 07 01**

Taxi tandem extension for trike 05 08 00



Ski set **05 08 10**

Seznam dílů Cruise carbon / Parts list

NIRVANA SYSTEMS s.r.o.

číslo / number	**Název / name**	**Jedn.**
010118	AA powerfly / Main karbiners	ks
010127	Deska plastová Lexx / Board plastic	ks
010909	Spojka sedačky Electric - komplet / Harness connector	ks
010912	Pružinka spojky sedačky + Cruise Carbon / Connector spring	ks
050000	Tříkolka Cruise Carbon / Trike Cruise Carbon	ks
050100	Rám vč. přední vidlice Cruise Carbon komplet /Frame incl. front fork	ks
050104, 050105	PLTV Rozpěrka (L+P) Cruise Carbon/ Struts	pár
050107	Zátka - Pouzdro rozpěrky Cruise Carbon/ Plug	ks
050108	Zajišťovací kolík / Locking pin	ks
050117	Zajištění popruhu sedačky Cruise Carbon/ Harness belt secure lock	ks
050119	Držák padákových šňůr Cruise Carbon/ Glider lines holder	ks
050125	Velcro pásek tříkolka - sada Trike, Cruise/ Velcro straps	sada
050126A	Manuál tříkolka Cruise Carbon - ANG/ Manual	ks
050126C	Manuál tříkolka Cruise Carbon - CJ	ks
050200	PLTV- Přední vidlice Cruise Carbon/ Front fork	ks
050204	Zátka - rameno vidlice Cruise Carbon/ Plug	ks
050210	Zátka - pedál brzdy Cruise Carbon/ Plug	ks
050211	Pedál + táhlo Cruise Carbon / Pedal	sada
050212	Hřídel předního kola Cruise Carbon/ Front wheel shaft	ks
050213	Distance přední osy Cruise Carbon/ Distance	ks
050216	Šroub - osa vidlice - tříkolka Cruise Carbon/ Axle screaw	ks
050219	Podložka - Táhlo brzdy Cruise Carbon / Underlay	ks
050223	Závlačka pedálu brzdy Cruise Carbon/ Cotter pin	ks
050302-L,050301-R	Rameno nápravy Cruise Carbon (L+P)/ Axle bracket (L+R)	pár
050305-L	Hřídel zadního kola levá Cruise Carbon/ Bear wheel shaft left	ks
050306-R	Hřídel zadního kola pravá Cruise Carbon/ Bear wheel shaft right	ks
050401	Skelet Cruise Carbon/ Skeleton	ks
050402	Pojistný kolík skeletu přední Cruise Carbon/ Front safety pin	ks
050403	Pojistný kolík skeletu Cruise Carbon zadní/ Bear safety pin	ks
050404	Trubka přední nápravy Cruise Carbon / Front Axle Tube	ks
050405	Zátka - Trubka přední nápravy Cruise Carbon/ Plug	ks
050408A	Rychloupínák 55 mm Cruise Carbon / Quick lock part	ks
050408B	Šroub rychloupínáku trubky skeletu Cruise Carbon / Screaw for quicklock	ks
050409	Úchyt pružiny řízení Cruise Carbon/ Spring fitting	ks
050411	Pružina řízení Trike, Cruise Carbon / Spring	ks
050501	Kolo-přední disk Cruise Carbon/ Front wheel - disc	ks
050503	Kolo přední plášť - pneu Cruise Carbon/ Front wheel - tire	ks
050504	Kolo přední-duše Cruise Carbon/ Front wheel - inner tube	ks

050505	Redukce rozšíření předního kola Cruise Carbon/ Front wheel reduction	ks
050506	Krytka středu předního kola Cruise Carbon/ Front wheel centre cover	ks
050507	Brzda bubnová Cruise Carbon-náboj/ Brake hub	ks
050509	Redukce bubnu brzdy Cruise Carbon/ Break reduction	ks
050511	Brzda bubnová Cruise Carbon/ Brake	ks
050601-R	Kolo zadní pravé-disk,plášť,duše Cruise Carbon / Back wheel right	ks
050602-L	Kolo zadní levé-disk,plášť,duše Cruise Carbon / Back wheel left	ks
050603	Kolo zadní náboj včetně ložisek Cruise Carbon/ Back wheel hub incl. bearings	ks
050604	Krytka středu zadního kola Cruise Carbon/ Back wheel centre cover	ks
050605	Distance ložisek zadního kola Cruise Carbon/ Distance	ks
050606	Ložisko pro Kolo zadní náboj Cruise Carbon/ Back wheel bearing	ks
050701	Taška na tříkolku Cruise Carbon/ Transport bag	ks
050702	Lanko výztuhy rámu Cruise Carbon/ Frame string	ks
050703	Nálepka / Sticker "CRUISE CARBON" 2/0 / Sticker	ks

Seznam dílů náprava Cruise Carbon taxi / parts list

číslo / number	**Název / name**	**Jedn.**
010118	AA powerfly / Main karabiner	ks
010127	Deska plastová Lexx / Board plastic	ks
010912	Pružinka spojky sedačky + Cruise Carbon / Connector spring	ks
050117	Zajištění popruhu sedačky Cruise Carbon/ Harness belt secure lock	ks
050119	Držák padákových šňůr Cruise Carbon Rodeo/ Glider lines holder	ks
050204	Zátka - rameno vidlice Cruise Carbon/ Plug	ks
050206	Rameno pružiny řízení Cruise Carbon	ks
050216	Šroub - osa vidlice - tříkolka Cruise Carbon/ Axle screw	ks
050807	Ložisko Cruise Carbon Taxi/ Bearing	ks
050405	Zátka - Trubka přední nápravy Cruise Carbon/ Plug	ks
050409	Úchyt pružiny řízení Cruise Carbon/ Spring fitting	ks
050411	Pružina řízení Trike, Cruise Carbon / Spring	ks
050702	Lanko výztuhy rámu Cruise Carbon/ Frame support string	ks
050800	Náprava Cruise Carbon TAXI / Taxi tandem extension for trike	ks
050802	Rám Cruise Carbon TAXI/ Frame	ks
050803	Přední vidlice Cruise Carbon TAXI/ Front fork	ks
050804	Trubka přední nápravy Cruise Carbon TAXI / Front Axle Tube	ks
050805	Kolo přední velké komplet - Cruise Carbon Taxi/ Front wheel	ks
050806	Hřídel předního kola Cruise Taxi/ Front wheel shaft	ks
050807	Ložisko Cruise Carbon Taxi/ Bearing	ks
050808	Držák tandemové nástavby/ Tandem extension holder	ks
050809	Deska dřevěná TAXI / Board wooden	ks
050828	Sedačka HAGI Taxi/ Harness	ks
	Rozpěrka Tandem / Tandem struts	pár
	Lemovka PVC bílá na desku/ Edging	m

OPERATING RECORDS

SERVICE LIST

List of mandatory checks performed, repairs, important part replacements, …			
Operation (reason)	date	flight hours	signature – checked by

List of mandatory checks performed, repairs, important part replacements, …			
Operation (reason)	date	flight hours	signature – checked by

RECORD OF BULLETIN IMPLEMENTATIONS OR MANDATORY CHANGES

serial number	bulletin number	date	note	performed – signature

NOTES:

NOTES:

EQUIPMENT

Trike Cruise Carbon		☐				
Shell cover		☐				
Transport bag		☐				
Harness connectors		☐				
Frame reinforcement strings	115	☐	125	☐	145	☐
Line holder		☐				
User Manual		☐				

OPTIONAL EQUIPMENT

Tandem extension TAXI		☐
Tandem passenger harness		☐
Tandem spreads		☐
Powerfly, 4 Pcs		☐
Ski		☐
Ski transport bag		☐

WARRANTY

The warranty covers manufacture and material faults for all parts of this trike. **This product is cowered by 1 year manufacturers' warranty**

The warranty does not cover any damages caused by theft. It does not cover any broken or destroyed parts due to incorrect use of the MPG, use in unsuitable weather conditions, wrong assembly of mechanical parts and damages caused by falls.

The warranty ceases if the MPG is sold to the third person, or in case of incorrect use, unprofessional repair or installation of unoriginal parts.

The guarantee is valid, when dated and signed by both sides.

Keep in mind, that this engine has not got an aircraft certification. It is responsibility of the pilot as the user to assemble and check the MPG before each flight.

Date …… Seller ……..

The buyer confirms, that he was informed about correct operation of the MPG; he will be responsible for finding out about any changes or mandatory bulletins from the manufacturer, related to this MPG.

Buyer ……..

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